

# FACT SHEET



## **Madison County Mines Site Harmony Lake Subsite - OU1 Fredericktown, Missouri**

**September 2000**

### **INTRODUCTION**

The U.S. Environmental Protection Agency (EPA) Region 7 is preparing to conduct additional sampling and begin removing soils contaminated with lead around the Harmony Lake Subsite of Operable Unit 1 (OU1), in Fredericktown, Missouri. Previous sample results at the Harmony Lake subsite show lead concentrations at a level which may pose a risk in residential settings. This action is slated to begin in late September/early October.

### **BACKGROUND**

Operable Unit 1 of the Madison County Mine Site is located in what is commonly referred to as the "Old Lead Belt," where mining activity was first recorded in about 1742 and continued into the 1970s. The mining and milling of ore in the Old Lead Belt produced an estimated 250 million tons of tailings/waste.

OU1 is located in the northeast quarter of Madison County, Missouri, ranging from three to five miles from the town of Fredericktown. OU1 consists of four major mining features, or subsites, that are referred to as the Mine La Motte tailings pile, the Harmony Lake tailings pile, the Basler tailings pile, and the Old Jack Mine.

The subject of this clean-up, the Harmony Lake tailings pile, is located approximately 1/4 mile west of the intersection of Highway OO and Copper Mines Road. This tailings pile covers

approximately 30 acres and includes properties used for both residential and recreational purposes. The residential properties surrounding Harmony Lake encompass approximately 50-60 acres.

### **SAMPLING UPDATE**

In February 2000, soil and tailings samples were collected from in and around the Harmony Lake tailings pile, Mine La Motte tailings pile, Basler tailings pile, and the Old Jack Mine. Elevated lead levels were detected at each of these locations. Samples collected from residential yards and a picnic area around Harmony Lake detected lead concentrations ranging from 166 to 19,100 parts per million (ppm). Lead levels in the tailings located south of Harmony Lake Dam ranged from 257 to 35,000 ppm. Tailings samples collected from the tailings at the Mine La Motte tailings contained lead ranging from 490 to 3,970 ppm. Soil samples collected from near the Old Jack Mine contained lead ranging from 19,100 to 22,000 ppm. Samples collected from the Basler tailings pile detected lead levels ranging from 1,520 to 10,200 ppm.

### **FUTURE ACTIVITIES**

EPA determined that the high soil levels found at Harmony Lake and the adjacent tailings pile pose a significant health threat to the Harmony Lake residents. Therefore an immediate response, known as a removal action, is needed to eliminate the potential for residents' exposure

to lead in soils and tailings at Harmony Lake.

Additional sampling of residential properties in the Harmony Lake development will be conducted concurrently with the removal action. This sampling will help EPA determine the extent of the lead contamination in the area. Samples will be taken from four quadrants on each property, along with play areas, gardens, and sand piles or driveways appearing to consist of mine waste.

EPA has set a residential “action level” of 400 ppm of lead, which will determine whether a particular residential property is qualified for a lead clean-up. Only those areas where there is a sample above 400 ppm will be addressed.

Cleanup actions will involve excavating the top layer of soil from the contaminated area(s) of the property and backfilling the yard with clean soil. At residential properties and picnic areas, the soil will be removed down to 12 inches, or until the 400 ppm cleanup standard is met. At 12 inches, if levels exceed 400 ppm lead, a permanent physical barrier (heavy orange plastic mesh) will be placed between the contaminated soil and the clean backfilled soil. EPA plans on restoring the yards, as nearly as possible, to their original condition. All removal activity will be conducted at no-cost to the property owner.

The lead levels found in the Mine La Motte tailings, the Old Jack Mine, and the Basler tailings do not warrant a response action at this time. Investigations will continue to determine if the lead levels at these subsites pose any risk to human health or the environment.

## **HEALTH EDUCATION PROGRAM**

EPA is encouraging Madison County residents to have their children’s blood-lead levels sampled by the Madison County Health Department, free of charge. Residents are welcome to contact the Madison County Health Department at (573) 783-2747, to schedule an appointment.

EPA, the Missouri Department of Health

(MDOH), and the Agency for Toxic Substances and Disease Registry (ATSDR), recommend limiting exposure of young children to lead contaminated soil. This can be accomplished in the following ways:

- Children should not eat, drink or play in areas of known contamination.
- Wash children's hands after playing outside and before meals.
- Wash toys periodically and encourage children not to put toys in their mouths.
- Clean floors, window frames, window sills, and other surfaces often. Use a mop or sponge with warm water and a general all-purpose cleaner.

## **ADDITIONAL INFORMATION**

Madison County Mine Tailings site-related documents are available for review at the Ozark Public Library, 137 W. Main, Fredericktown, Missouri, during normal business hours.

If you have questions about this fact sheet, or need additional information regarding this site, please contact:

Dana Blubaugh  
Community Involvement Coordinator  
EPA Region 7 - Office of External Programs  
901 N. 5<sup>th</sup> Street  
Kansas City, Kansas 66101  
913-551-7003  
or  
toll free 1-800-223-0425